Date #//3 o/ Label No.

I hereby certify that, on the date indicated above, this paper or fee was deposited with the U.S. Postal Service & that it was addressed for delivery to the Assistant Commissioner for Patents Washington, DC 20231 by "Express Mail Post Office to Addressee" service

Name (Print)

Signature

PLEASE CHARGE ANY DEFICIENCY UP TO \$300.00 OR CREDIT ANY EXCESS IN THE FEES DUE WITH THIS DOCUMENT TO OUR DEPOSIT ACCOUNT NO. 04-0100

Docket No.:3380/11127-US4

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of: Papsidero et al.

Serial No: TBA

Examiner: TBA

Filed: Concurrently Herewith

Group Art Unit: TBA

For: DETECTION AND TREATMENT OF BREAST DISEASE

SUBMISSION OF SEQUENCE LISTING AND STATEMENT PURSUANT TO 37 C.F.R. § 1.821

Hon. Commissioner of Patents Washington, DC 20231

Sir:

Pursuant to the requirements of 37 C.F.R. §1.821 through §1.825 for Sequence Listings, a computer readable form (diskette) containing the Sequence Listing and a paper copy of the Sequence Listing is enclosed herewith.

STATEMENT PURSUANT TO 37 C.F.R. § 1.821

Enclosed herewith is a computer readable form (diskette) containing sequence disclosure. Pursuant to Rule 37 C.F.R. §1.821, applicants herein state that

Dated: April 13, 2001

the contents of the labeled diskette, specifically the ASCII-encoded file therein labeled "Seqlist.txt", is identical to the paper copy of the sequence listing submitted herewith.

Respectfully submitted,

Neepa Y. Choksi

Registration No. 47,488 Agent for Applicant(s)

SEQUENCE LISTING

<110> Lawrence, Papsidero

```
Lyn, Dyster
      Jana, Frustaci
<120>
      Detection and Treatment of Breast Cancer
<130>
       3380/1I127-US4
<140>
<141> Concurrently Herewith
<150> 09/146,580
<151> 1998-09-03
<150> 60/071,899
<151>
       1998-01-20
ij
<150>
      60/092,155
       1998-07-09
<151>
      35
<160>
 <170>
      PatentIn version 3.0
<210>
<211>
      127
<212> PRT
<213> Homo sapiens
 <220>
<221> UNSURE
<222> (70)..(70)
<223> Xaa at position 70 is either Arg or Gly
<220>
<221> UNSURE
<222> (91)..(91)
      Xaa at position 70 is either Lys or Asn
<400> 1
Met Gln Gln Arg Gly Leu Ala Ile Val Ala Leu Ala Val Cys Ala Ala
                                                        15
Leu His Ala Ser Glu Ala Ile Leu Pro Ile Ala Ser Ser Cys Cys Thr
                                                    30
            20
                                25
```

```
Glu Val Ser His His Ile Ser Arg Arg Leu Leu Glu Arg Val Asn Met
        35
                             40
Cys Arg Ile Gln Arg Ala Asp Gly Asp Cys Asp Leu Ala Ala Val Ile
    50
Leu His Val Lys Arg Xaa Arg Ile Cys Val Ser Pro His Asn His Thr
Val Lys Gln Trp Met Lys Val Gln Ala Ala Xaa Lys Asn Gly Lys Gly
                85
Asn Val Cys His Arg Lys Lys His His Gly Lys Arg Asn Ser Asn Arg
                                 105
Ala His Gln Gly Lys His Glu Thr Tyr Gly His Lys Thr Pro Tyr
<210>
<211>
       104
<212>
       PRT
<213>
       Homo sapiens
 1,2
<220>
<221>
      UNSURE
<222>
      (47)..(47)
       Xaa at position 47 is either Arg or Gly
<223>
 1:20
<220>
<221>
      UNSURE
<222>
       (68)..(68)
       Xaa at position 47 is either Lys or Asn
<400>
       2
Leu Pro Ile Ala Ser Ser Cys Cys Thr Glu Val Ser His His Ile Ser
Arg Arg Leu Leu Glu Arg Val Asn Met Cys Arg Ile Gln Arg Ala Asp
Gly Asp Cys Asp Leu Ala Ala Val Ile Leu His Val Lys Arg Xaa Arg
                            40
Ile Cys Val Ser Pro His Asn His Thr Val Lys Gln Trp Met Lys Val
    50
                        55
```

Gln Ala Ala Xaa Lys Asn Gly Lys Gly Asn Val Cys His Arg Lys Lys

t i

```
    65
    70
    75
    80
```

His His Gly Lys Arg Asn Ser Asn Arg Ala His Gln Gly Lys His Glu 85 90 95

Thr Tyr Gly His Lys Thr Pro Tyr
100

<210> 3 <211> 18

<212> PRT

<213> Homo sapiens

<400> 3

Thr Glu Val Ser His His Ile Ser Arg Arg Leu Leu Glu Arg Val Asn 1 5 10 15

Met Cys

<210> 4

<211> 16 <212> PRT

<213> Homo sapiens

<400> 4

(210> 5

<211> 19

<212> PRT

<213> Homo sapiens

<400> 5

Asn Ser Asn Arg Ala His Gln Gly Lys His Glu Thr Tyr Gly His Lys

1 10 15

Thr Pro Tyr

<210> 6

<211> 3117

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (1)..(3117)

<223> n at any position in the sequence may represent a or g or c or t/

<400> 60 aacatcctca cttgtgttgc tgtcagtgcc tgtanggcag gcaggaatgc agcagagagg actogocato gtggcottgg ctgtotgtgc ggccctacat gcctcagaag ccatacttcc 120 cattgcctcc agctgttgca cggaggtttc acatcatatt tccagaaggc tcctggaaag 180 agtgaatatg tgtcgcatcc agagagctga tggggattgt gacttggctg ctgtcatcct 240 300 tcatgtcaag cgcngaagaa tctgtgtcag cccgcacaac catactgtta agcagtggat 360 gaaagtgcaa gctgccaana aaaatggtaa aggaaatgtt tgccacagga agaaacacca 420 tagcaagagg aacagtaaca gggcacatca ggggaaacac gaaacatacg gccataaaac 480 tcettattag agaatctaca gataaatcta cagagacaat cccccaagtg gacttggcca 540 atattggttt ttaaaaaatg aacaattgtg ccgtatgcaa atgtacccaa taatatactc 600 660 cartggaaaa tgaaatgaaa aaannatact ggctgggtat ggtgggtccc cccttttatc ccannnnctt cgggaggcag aggcaggagg atcacttgag accaggantt ngagacnagc 720 780 taggggcaaa anagcaanga cntcatttnt acaaacnaaa aaaaannttg gcccggcntg gtagnacttg cntataatcc cagcnacatg ggaggtngag gtgggaggat cacttgagtc 840 900 tgggngagtt ngaggtngca gtgagcagcn tgggtgacag aatgnagacc ntgtctctaa aaataataat aataatgata gtgtatatct tcatataata ttttaagnag gagcatatag 960 atataacttn ctcccaactt tttaattata gttttccaaa cttacagaga agttaaaaga 1020 atggtacaat gaacatctat atatctttca ccacaatatt aatcattgtt aatattgtgc 1080 cacatttgct ttctctctcc tctcttggta ggggttncaa tataaaatat tataactttt 1140 aaaatatatc ttgttttgct aaccattgga aaataagttg caaaaatcat gacacttcac 1200 ccctagtttc ttttnggtgt tataacttga cataccctaa aataaagaca tttttctaca 1260 taatcacctt atcagtttta tacctaaaaa attaataatt tcatctaata tattccatat 1320

1380 tcaaattttc ccaactattt agagagcatt ttatgtagtt tttttttcac tccagtaatc aatcaaggtn gacatacata ttgcaaataa ttgttatttt tctttaatat ctttcaatct 1440 1500 aagaaagttc ctctgtcttt tttttttaat ttttaaaatt attttgttga gggagggtct tgctgtgtct tccaggctgg agtgcagtgg cacaattttg attttggctc actgaagcct 1560 1620 caactttagg gctcaagcaa tcctcccacc tcagcctncc cgagtatctg ggatcaaggt 1680 gcatacccac cacacctggc taattttgtt tattttttgt agagacaggg tctcactatg ttgcccaggt tgatctcaaa ctcctgggct caagcgatcc tcccacctta gcctcccaaa 1740 gtactgggat tataggtgtg agccacagtg cctggcctaa ttattttctt gtgatcaaat 1800 1860 tcaggtttaa tgtttttggt taagaatttc ctacgtgaat tcgtgtactt attttgtcat ttagagttca taaatattag ggtttatttt ctaaatagaa tagtttaaac taaatataac 1920 tteaaaacgt ctagtttgag tagctaccgt tgtttggatt gaaattttct gatactgaaa 1980 agaacaaaaa gcctgccttt ctgcccanaa csnnttgcyt cccccagtna gttcttggng 2040 2100 cagnactagt tagggnccca gagttnggcc ttnngkgtgg tgattttang ytctgcctaa 2160 agaaggngcn wacatytttt agctcctatt ccaccyttct namamgtttt tgttgtkgtt tenttgtttt tttkgagaca grrtntnayt ctgtttgccc argctggart tgcagtggca 2220 caatytnggy tncattgcaa cytcngcytc cssgccgttc aaktgatyyt cttgcytcag 2280 2340 cytccccaag taantgatat tacaggngcc cagccaccam accccgntga wttttgtatt 2400 tttartarar amrgggtttt cccgcnttgg cngggctggt ctcnaantcc ttgamctcna 2460 ktqaaccacc cqcctqtqcc ycccaaantg ctggaattac cancgttgan ccaccatgcc 2520 gggcycacac gtttgarttt ganaccattg tnccattcct cttttggcct yttttttntc 2580 catagnngct tcaagataga tangtaagrg cccagtagtn gttcwtarga agcnmatagr 2640 rancrqgarc cantttnatc aggtgggcag gtgtccnngg cytccctgct ggytnntccc 2700 aagcggtggt gttgccarga nktnttggar gtgataatgg gananaccag naggcmctga 2760 qtyncnntag gttnaaatgc caccaaaact ggcctttggc ctaatatccy ycnttgamta 2820 nttarcattt awtttattwa tttncctgac atttntgcma ncctttgtwt ttntatttcc

nctntatara wgargaaatt tgaggntytt araggtaaaa tganttgcnc nrgtnnacmc aggaagtggc nraranaanc tttttanatn mgaaaaaatt aataaaatat aatatgagag 2940 3000 taaaagttaa gataccaaaa cactggtgtn taattttttn aactaacaan ttgaattatt 3060 ttccatttta aattaattaa ccgtgataac caacattaat aaaagttaag ataccgn 3117 7 <210> <211> 381 <212> DNA Homo sapiens <213> <220> <221> unsure (207)..(207)<222> n may represent a or g or c or t/u <223> 21 NG <220> <221> unsure <222> (272)..(272)n may represent a or g or c or t/u <223> <400> 7 abgcagcaga gaggactcgc catcgtggcc ttggctgtct gtgcggccct acatgcctca 60 gaagccatac ttcccattgc ctccagctgt tgcacggagg tttcacatca tatttccaga 120 180 aggeteetgg aaagagtgaa tatgtgtege atccagagag etgatgggga ttgtgaettg gctgctgtca tccttcatgt caagcgcnga agaatctgtg tcagcccgca caaccatact 240 qttaaqcaqt qqatqaaaqt qcaaqctqcc aanaaaaatg gtaaaggaaa tgtttgccac 300 360 aggaagaaac accatggcaa gaggaacagt aacagggcac atcaggggaa acacgaaaca 381 tacggccata aaactcctta t

2880

```
<210>
       8
<211>
       104
<212>
       DNA
<213>
      Homo sapiens
```

t t

```
acacgaattc acgtaggaaa ttcttaacca aaaacattaa acctgaattt gatcacaaga
                                                                      60
aaataattag gccaggcact gtggctcaca cctataatcc cagt
                                                                     104
<210> 9
<211> 25
<212> DNA
<213> Homo sapiens
<400> 9
gaattcacgt aggaaattct taacc
                                                                      25
<210> 10
<211> 22
<212> DNA
<213> Homo sapiens
<400> 10
actgggatta taggtgtgag cc
                                                                      22
<210> 11
<211> 311
<212> DNA
<213> Homo sapiens
<220>
<221> unsure
<222> (101)..(101)
<223> n may be a or g or c or t/u
<220>
<221> unsure
<222> (162)..(162)
<223> n may be a or g or c or t/u
<400>
       11
ggagagagec gtatgttteg tgttteeeet gatgtgeeet gttaetgtte etettgeeat
                                                                      60
ggtgtttctt cctgtggcaa acatttcctt taccattttt nttggcagct tgcactttca
                                                                     120
tccactgctt aacagtatgg ttgtgcgggc tgacacagat tnttctgcgc ttgacatgaa
                                                                     180
ggatgacagc agccaagtca caatccccat cagctctctg gatgcgacac atattcactc
                                                                     240
tttccaggag ccttctggaa atatgatgtg aaacctccgt gcaacagctg gaggcaatgg
                                                                     300
```

a s

```
gaagtatggc t
                                                                      311
<210> 12
<211> 20
<212> DNA
<213> Artificial
<220>
<223>
      Sequencing primer T7
<400> 12
taatacgact cactataggg
                                                                       20
<210> 13
<211> 18
<212> DNA
<213> Artificial
<220>
<223> pCR3.1 Reverse Primer
<400> 13
tagaaggcac agtcgagg
                                                                       18
<210> 14
<211> 22
<212> DNA
<213> Artificial
 rasia.
<220>
      Gene specific primer (24R)
<223>
<400>
      14
actgggatta taggtgtgag cc
                                                                       22
<210> 15
<211> 24
<212> DNA
<213> Artificial
<220>
<223>
      Gene specific primer (24R2)
<400>
       15
caaattcagg tttaatgttt ttgg
                                                                       24
```

```
<210> 16
  <211> 21
  <212> DNA
  <213> Artificial
<220>
        Gene specific primer (F4 )
  <223>
  <400> 16
  ctcaaacgtg tgagcccggc a
                                                                          21
  <210> 17
  <211> 25
  <212> DNA
  <213> Artificial
  < 2,20>
  <223>
         Gene specific primer (F3)
  <400>
        17
  getactcaaa ctagacgttt tgaag
                                                                         25
  <210> 18
  <211> 24
  <212> DNA
  <213> Artificial
   firett.
  <220>
  <223> primers F8
   1.4
  <400> 18
  ccgtatgttt cgtgtttccc ctga
                                                                         24
  <210> 19
  <211> 24
  <212> DNA
        Artificial
  <213>
  <220>
        Primer R5
  <223>
 <400>
        19
 agccatactt cccattgcct ccag
                                                                         24
 <210>
        20
 <211>
        150
```

t t

<212> PRT

<213> Homo sapiens

<400> 20

Met Asn Leu Trp Leu Leu Ala Cys Leu Val Ala Gly Phe Leu Gly Ala 1 5 10 15

Trp Ala Pro Ala Val His Thr Gln Gly Val Phe Glu Asp Cys Cys Leu 20 25 30

Ala Tyr His Tyr Pro Ile Gly Trp Ala Val Leu Arg Arg Ala Trp Thr 35 40 45

Tyr Arg Ile Gln Glu Val Ser Gly Ser Cys Asn Leu Pro Ala Ala Ile 50 60

Phe Tyr Leu Pro Lys Arg His Arg Lys Val Cys Gly Asn Pro Lys Ser

Arg Glu Val Gln Arg Ala Met Lys Leu Leu Asp Ala Arg Asn Lys Val 85 90 95

Phe Ala Lys Leu His His Asn Met Gln Thr Phe Gln Ala Gly Pro His 100 105 110

Ala Val Lys Lys Leu Ser Ser Gly Asn Ser Lys Leu Ser Ser Lys 115 120 125

Phe Ser Asn Pro Ile Ser Ser Ser Lys Arg Asn Val Ser Leu Leu Ile 130 135 140

Ser Ala Asn Ser Gly Leu 145 150

<210> 21

<211> 95

<212> PRT

<213> Homo sapiens

<400> 21

Met Cys Cys Thr Lys Ser Leu Leu Leu Ala Ala Leu Met Ser Val Leu 1 5 10 15

Leu Leu His Leu Cys Gly Glu Ser Glu Ala Ser Asn Phe Asp Cys Cys 20 25 30

Leu Gly Tyr Thr Asp Arg Ile Leu His Pro Lys Phe Ile Val Gly Phe 35 40 45

Thr Arg Gln Leu Ala Asn Glu Gly Cys Asp Ile Asn Ala Ile Ile Phe 50 60

His Thr Lys Lys Lys Leu Ser Val Cys Ala Asn Pro Lys Gln Thr Trp 65 70 75 80

Val Lys Tyr Ile Val Arg Leu Leu Ser Lys Lys Val Lys Asn Met 85 90 95

<210> 22

<211> 94

<212> PRT

<213> Homo sapiens

<400> 22

Met Ala Pro Leu Lys Met Leu Ala Leu Val Thr Leu Leu Gly Ala 1

Ser Leu Gln His Ile His Ala Ala Arg Gly Thr Asn Val Gly Arg Glu 20 25 30

Cys Cys Leu Glu Tyr Phe Lys Gly Ala Ile Pro Leu Arg Lys Leu Lys 35 40 45

Thr Trp Tyr Gln Thr Ser Glu Asp Cys Ser Arg Asp Ala Ile Val Phe 50 55 60

Val Thr Val Gln Gly Arg Ala Ile Cys Ser Asp Pro Asn Asn Gln Arg

Val Lys Asn Ala Val Lys Tyr Leu Gln Ser Leu Glu Arg Ser 85 90

<210> 23

<211> 96

<212> PRT

<213> Homo sapiens

<400> 23

Met Gln Ile Ile Thr Thr Ala Leu Val Cys Leu Leu Ala Gly Met 1 5 10 15

Trp Pro Glu Asp Val Asp Ser Lys Ser Met Gln Val Pro Phe Ser Arg
20 25 30

Cys Cys Phe Ser Phe Ala Glu Gln Glu Ile Pro Leu Arg Ala Ile Leu 35 40 45

Cys Tyr Arg Asn Thr Ser Ser Ile Cys Ser Asn Glu Gly Leu Ile Phe 50 60

Lys Leu Lys Arg Gly Lys Glu Ala Cys Ala Leu Asp Thr Val Gly Trp 70 75 80

Val Gln Arg His Arg Lys Met Leu Arg His Cys Pro Ser Lys Arg Lys
85 90 95

<210> 24

<211> 77

<212> PRT

<213> Homo sapiens

<400> 24

Ala Gln Pro Asp Ser Val Ser Ile Pro Ile Thr Cys Cys Phe Asn Val 1 10 15

The Asn Arg Lys Ile Pro Ile Gln Arg Leu Glu Ser Tyr Thr Arg Ile 20 25 30

Thr Asn Ile Gln Cys Pro Lys Glu Ala Val Ile Phe Lys Thr Lys Arg

GTy Lys Glu Val Cys Ala Asp Pro Lys Glu Arg Trp Val Arg Asp Ser 50 55 60

Met Lys His Leu Asp Gln Ile Phe Gln Asn Leu Lys Pro
70 75

<210> 25

<211> 98

<212> PRT

<213> Homo sapiens

<400> 25

Met Lys Val Ser Ala Val Leu Leu Cys Leu Leu Leu Met Thr Ala Ala 1 5 10 15

Phe Asn Pro Gln Gly Leu Ala Gln Pro Asp Ala Leu Asn Val Pro Ser 20 25 30

Thr Cys Cys Phe Thr Phe Ser Ser Lys Lys Ile Ser Leu Gln Arg Leu 35 40 45

Lys Ser Tyr Val Ile Thr Thr Ser Arg Cys Pro Gln Lys Ala Val Ile 50 60

Phe Arg Thr Lys Leu Gly Lys Glu Ile Cys Ala Asp Pro Lys Glu Lys 80

Trp Val Gln Asn Tyr Met Lys His Leu Gly Arg Lys Ala His Thr Leu 90

Lys Thr

<210> 26

<211> 97

<212> PRT

<213> Homo sapiens

<400> 26

Met Lys Val Ser Ala Ala Leu Leu Trp Leu Leu Ile Ala Ala Ala 1 5 10 15

Phie Ser Pro Gln Gly Leu Ala Gly Pro Ala Ser Val Pro Thr Thr Cys
20 25 30

Cys Phe Asn Leu Ala Asn Arg Lys Ile Pro Leu Gln Arg Leu Glu Ser

Tyr Arg Arg Ile Thr Ser Gly Lys Cys Pro Gln Lys Ala Val Ile Phe
50 55 60

Lys Thr Lys Leu Ala Lys Asp Ile Cys Ala Asp Pro Lys Lys Trp 70 75 80

Val Gln Asp Ser Met Lys Tyr Leu Asp Gln Lys Ser Pro Thr Pro Lys 85 90 95

Pro

<210> 27

<211> 99

<212> PRT

<213> Homo sapiens

<400> 27

Met Lys Ala Ser Ala Ala Leu Leu Cys Leu Leu Leu Thr Ala Ala Ala 1 5 10 15

Phe Ser Pro Gln Gly Leu Ala Gln Pro Val Gly Ile Asn Thr Ser Thr 20 25 30

Thr Cys Cys Tyr Arg Phe Ile Asn Lys Lys Ile Pro Lys Gln Arg Leu 40 45 Glu Ser Tyr Arg Arg Thr Thr Ser Ser His Cys Pro Arg Glu Ala Val 55 Ile Phe Lys Thr Lys Leu Asp Lys Glu Asp Cys Ala Asp Pro Thr Gln 70 Lys Trp Val Gln Asp Pro Met Lys His Leu Asp Lys Lys Thr Gln Thr Pro Lys Leu <210> 28 <211> 99 <212> PRT <213> Homo sapiens <400> 28 Met Lys Val Ser Ala Ala Leu Leu Cys Leu Leu Leu Thr Ala Ala Ala 10

Phe Ile Pro Gln Gly Leu Ala Gln Pro Asp Ala Ile Asn Ala Pro Val

Cys Cys Tyr Asn Phe Thr Asn Arg Lys Ile Ser Val Gln Arg Leu 35

Ala Ser Tyr Arg Arg Ile Thr Ser Ser Lys Cys Pro Lys Glu Ala Val 50 55

Ile Phe Lys Thr Ile Val Ala Lys Glu Asp Cys Ala Asp Pro Lys Gln 65 70 75 80

Lys Trp Val Gln Asp Ser Met Asp His Leu Asp Lys Gln Thr Gln Thr 85 95

Pro Lys Thr

29 <210>

<211> 91

<212> PRT

<213> Homo sapiens

Met Lys Val Ser Ala Ala Arg Leu Ala Val Ile Leu Ile Ala Thr Ala 1 5 10 15

Leu Cys Ala Pro Ala Ser Ala Ser Pro Tyr Ser Ser Asp Thr Thr Pro 20 25 30

Cys Cys Phe Ala Tyr Ile Ala Arg Pro Leu Pro Arg Ala His Ile Lys 35 40 45

Glu Tyr Phe Tyr Thr Ser Gly Lys Cys Ser Asn Pro Ala Val Phe 50 55 60

Val Thr Arg Lys Asn Arg Gln Val Cys Ala Asn Pro Glu Lys Lys Trp 65 70 75 80

Val Arg Glu Tyr Ile Asn Ser Leu Glu Met Ser 85 90

<210> 30

<211> 93

<212> PRT

<213> Homo sapiens

<400> 30

Met Lys Ile Ser Val Ala Ala Ile Pro Phe Phe Leu Leu Ile Thr Ile $1_{\frac{1}{2}}^{\frac{1}{2}}$ 5 10 15

ATa Leu Gly Thr Lys Thr Glu Ser Ser Arg Gly Pro Tyr His Pro
20 25 30

Ser Glu Cys Cys Phe Thr Tyr Thr Tyr Lys Ile Pro Arg Gln Arg
35 40 45

Ile Met Asp Tyr Tyr Glu Thr Asn Ser Gln Cys Ser Lys Pro Gly Ile
50 55 60

Val Phe Ile Thr Lys Arg Gly His Ser Val Cys Thr Asn Pro Ser Asp 65 70 75 80

Lys Trp Val Gln Asp Tyr Ile Lys Asp Met Lys Glu Asn 85 90

<210> 31

<211> 92

<212> PRT

<213> Homo sapiens

Met Lys Leu Cys Val Thr Val Leu Ser Leu Leu Met Leu Val Ala Ala 5 Phe Cys Ser Pro Ala Leu Ser Ala Pro Met Gly Ser Asp Pro Pro Thr 20 25 30 Ala Cys Cys Phe Ser Tyr Thr Ala Arg Lys Leu Pro Arg Asn Phe Val Val Asp Tyr Tyr Glu Thr Ser Ser Leu Cys Ser Gln Pro Ala Val Val 55 60 Phe Gln Thr Lys Arg Ser Lys Gln Val Cys Ala Asp Pro Ser Glu Ser Trp Val Gln Glu Tyr Val Tyr Asp Leu Glu Leu Asn <210> 32 <211> 93 <212> PRT <213> Homo sapiens <400> 32 Met Gln Val Ser Thr Ala Ala Leu Ala Val Leu Leu Cys Thr Met Ala Leu Cys Asn Gln Val Leu Ser Ala Pro Leu Ala Ala Asp Thr Pro Thr 20 25 30 Ala Cys Cys Phe Ser Tyr Thr Ser Arg Gln Ile Pro Gln Asn Phe Ile 35 40 45 Ala Asp Tyr Phe Glu Thr Ser Ser Gln Cys Ser Lys Pro Ser Val Ile 50 60 55 Phe Leu Thr Lys Arg Gly Arg Gln Val Cys Ala Asp Pro Ser Glu Glu Trp Val Gln Lys Tyr Val Ser Asp Leu Glu Leu Ser Ala <210> 33

<211> 92

<212> PRT

<213> Homo sapiens

Met Gln Val Ser Thr Ala Ala Leu Ala Val Leu Leu Cys Thr Met Ala 15

Leu Cys Asn Gln Phe Ser Ala Ser Leu Ala Ala Asp Thr Pro Thr Ala 25

Cys Cys Phe Ser Tyr Thr Ser Arg Gln Ile Pro Gln Asn Phe Ile Ala 40

Asp Tyr Phe Glu Thr Ser Ser Gln Cys Ser Lys Pro Gly Val Ile Phe 55

Leu Thr Lys Arg Ser Arg Gln Val Cys Ala Asp Pro Ser Glu Glu Trp

Val Gln Lys Tyr Val Ser Asp Leu Glu Leu Ser Ala

<210> 34

<211> <212> 89

PRT

<213> Homo sapiens

<400> 34

Met Lys Gly Leu Ala Ala Leu Leu Val Leu Val Cys Thr Met Ala 5

Leu Cys Ser Cys Ala Gln Val Gly Thr Asn Lys Glu Leu Cys Cys Leu 20 IJ

Val Tyr Thr Ser Trp Gln Ile Pro Gln Lys Phe Ile Val Asp Tyr Ser 35

Glu Thr Ser Pro Gln Cys Pro Lys Pro Gly Val Ile Leu Leu Thr Lys 50

Arg Gly Arg Gln Asp Cys Ala Asp Pro Asn Lys Lys Trp Val Gln Lys 75 80

Tyr Ile Ser Asp Leu Lys Leu Asn Ala

<210> 35

<211> 104

<212> DNA

<213> Homo sapiens

<400>

acacgaattc acgtaggaaa ttcttaacca aaaacattaa acctgaattt gatcacaaga